A Scaling for Differential Single and Multiple Ionization of Kr by Electron Impact O.G. DE LUCIO, J. GAVIN, R.D. DUBOIS, University of Missouri-Rolla, Rolla, MO 65409 — Differential measurements of Kr ionization by electron impact were performed for an electron beam of 240 eV and 500 eV energies, colliding with a Kr gas jet target. Results for absolute doubly differential cross sections (DDCS) of Kr$^+$, Kr$^{2+}$ and Kr$^{3+}$ ionization states are presented. Kr ions are pulled out of the interaction region by means of a pulsed field and recorded by means of a channeltron detector used in coincidence with a projectile detector in order to acquire differential information. DDCS plotted as a function of projectile energy loss and momentum transfer were investigated, some similarities were observed but in general no “universal curves” were found. By using a “reduced momentum” the DDCS for different angles, energy losses and even for different projectile energies could be compressed into two curves, corresponding to large ($90^\circ \geq \theta \geq 30^\circ$) and small ($\theta < 30^\circ$) scattering angles. These different scalings and variables will be presented and discussed.